CCA52/CCS52/CSC52 — OPERATING SYSTEM

Time : Three hours   Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. List the main advantages of Multiprocessor Systems.

2. State the use of Fork and exec system calls.

3. Mention three different types of Scheduling Queues.

4. What is Deadlock Prevention?

5. What is Virtual Memory? Mention its advantages.

6. Define the term Physical Address Space.

7. Name the common schemes used for defining the Logical Structure of a directory.

8. List various File Attributes.

9. Write down the features of Linux Kernel.

10. Define : Page Fault.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Briefly describe the Storage Structure.

Or

(b) Summarize about the types of System Calls.

12. (a) How to use the Semaphores to deal with the Critical–Section Problem? Explain.

Or

(b) Give a detailed description about the Deadlocks and its characterization.

13. (a) Briefly discuss the concept of Segmentation.

Or

(b) Exemplify any two Page Replacement Algorithms.

14. (a) Narrate any two File accessing Methods.

Or

(b) Explicate any two Disk Scheduling algorithms with suitable examples.

15. (a) With a neat sketch, explain the components of a Linux System.

Or

(b) Summarize about the Memory Management concepts in Linux.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the various Operations on Process in detail.

17. Explicate the different techniques used for evaluating CPU Scheduling Algorithms.

18. Explain how paging supports Virtual Memory. With neat diagram, discuss how logical address is translated into Physical address.

19. Narrate the operating structure of a File System Implementation.

20. Analyze the various Security services provided in the Linux System.

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